

Physical Readiness Training for Urban Operations



Mission

Develop a physical readiness training program that prepares soldiers for the physical demands of UO.

Common Tasks

STP 21-1-SMCT, 01 Oct 01

“This manual contains the common tasks that are essential to the Army’s ability to win on the modern battlefield. In the event of war, **regardless of job or individual MOS**, each soldier risks exposure to hostile actions. This manual contains the common tasks, which will help soldiers **fight, survive, and win** in combat.”

Physically Demanding Common Tasks

- Navigate From One Point On The Ground to Another While Dismounted.
- Transport a Casualty.
- Move under Direct Fire.
- Move Over, Through, or Around Obstacles (except Minefields).
- React to Indirect Fire While Dismounted.
- Construct Individual Fighting Positions.

Common Tasks and the Physical Components Required

		Muscular Strength	Muscular Endurance	Aerobic Endurance	Anaerobic Endurance	Mobility
	Foot March	X	XXX	XXX	X	X
	Climbing	XXX	XX	X	XXX	XXX
	Crawling	XX	XX	XX	XX	XXX
	Repeated Rush to Cover	XX	XX	X	XXX	XXX
	Casualty Carry	XXX	XX	X	XXX	XXX
	Digging	XX	XXX	XX	XX	XX
	Total	13	14	10	14	15

Common Tasks



Common Tasks

21



Common Tasks



Common Tasks





Components of Physical Readiness

The UO PRT System

**TOUGHENING
PHASE**

Transition criteria

**SUSTAINING
PHASE**



**Urban
Operations**



Urban Combat Skills

FM 3-06.11

- Chapter 3 of this manual contains the specified tasks that are essential for small units to fight and win in urban operations.
- Urban battle space is the critical factor in designing the PRT program.
- A thorough analysis of UO tasks was conducted to develop a PRT program that will better prepare the soldier to operate in the close combat environment required in both offensive and defensive UO.

Urban Combat Skills

- Movement in battle space
- Entry techniques
- Clearing
- Breaching
- Fighting positions

Physical Readiness Training Related to Urban Operations Skills

MOVEMENT

Urban Operation Skill	Muscular Strength	Muscular Endurance	Aerobic Endurance	Anaerobic Endurance	Mobility
Crossing Open Areas	X	XX	X	XXX	XX
Movement Parallel to Buildings	X	XX	X	XX	XX
Movement Past Windows	X	XX	X	XX	XXX
Movement Around Corners	X	XX	X	XX	XXX
Crossing a Wall	XX	X	X	XX	XX
Use of Doorways	X	X	X	XX	XX
Movement Between Positions	X	X	X	XXX	XXX
TOTAL	8	13	7	16	17

Physical Readiness Training Related to Urban Operations Skills

ENTRY TECHNIQUES

Urban Operation Skill	Muscular Strength	Muscular Endurance	Aerobic Endurance	Anaerobic Endurance	Mobility
Upper Building Levels	XX	XX	X	XX	XXX
Use of Grappling Hooks	XX	X	X	XX	XXX
Scaling of Walls	XXX	XX	X	XX	XX
Rappelling	X	X	X	X	XX
Entry at Lower Levels	XX	XX	X	XX	XX
Use of Hand Grenades	XX	X	X	X	XXX
TOTAL	12	10	6	10	15

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Battle Space



Battle Space



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Battle Space



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Battle Space

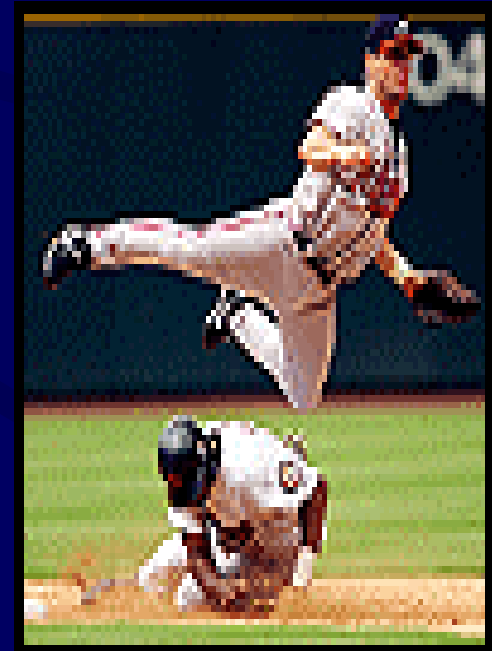


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Relationship Between UO Tasks and Sport Specific Skills



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What is Functional Training?

A Continuum of Function

Training activities that detract from the performance of goal activities.

Training activities that enhance the performance of goal activities.



Faulty motor patterns.

Effective motor patterns.

Lack of strength or strength that cannot be expressed.

Strength that meets the demands of the activity.

Lack of activity-specific endurance.

Optimal activity-specific endurance.

Lack of mobility for the activity.

Optimal mobility for the activity.

Key Concepts of Functional Training

- Train movements not muscles.
- Train in 3-Dimensions.
- Teach fundamental movement skills before task-specific skills.
- Create a rich proprioceptive environment.

Train Movements not Muscles

- *“Movement in a complex system is not a result of balancing the forces of an agonist and an antagonist moving in a single plane of motion ...”*
- *“...synergistic relationships will depend on the desired motion, the muscles’ preferred orientations, and the geometry of the joint.”*

-Keshner, Movement Science, 1991

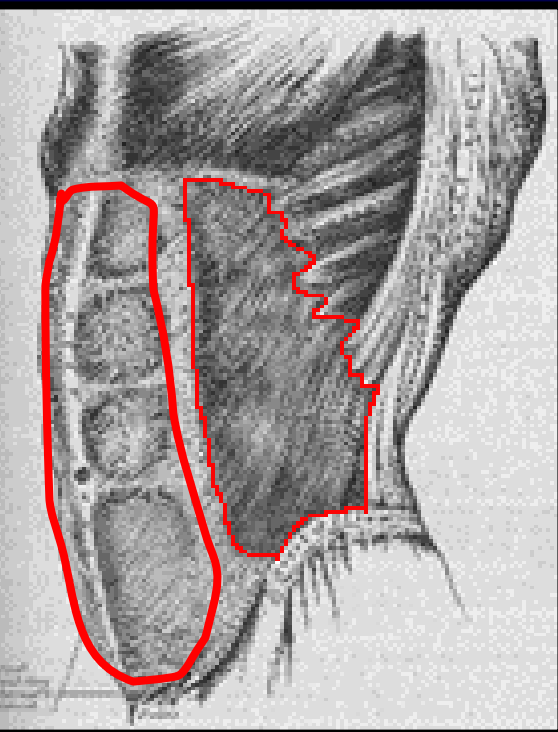
Train Movements not Muscles

- PRT develops body management competency.
- PRT enhances individual movement efficiency and the manipulative skills required to functionally employ strength, endurance and mobility.
- PRT develops a sense of timing and grace.

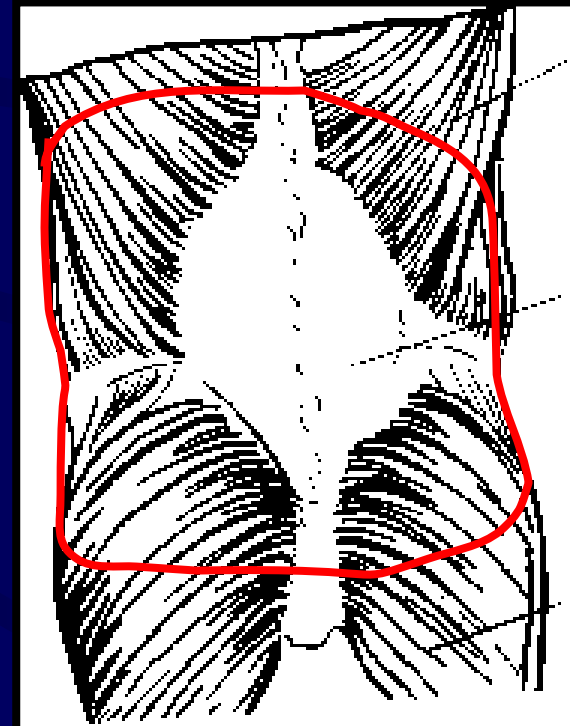
Performance-oriented training requires functional movements... the ability to stop, start, get up, get down, change direction, squat, lunge, reach, twist, push, pull, jump and land.



Train in 3-Dimensions



- Power projection platform
- Strength emanates from the core



Training in 3-D enhances individual movement efficiency and the manipulative skills required to functionally employ strength, endurance and mobility.



Fundamental Movement Skills Before Task-Specific Skills

- **Mostability - Mobility with stability**
- **Stability is *motion* at the**
 - **right place**
 - **right time**
 - **right amount**

Fundamental Movement Skills Before Sports Specific Skills

- Mobility without stability is like driving a car with bad brakes.
- Functional mobility depends on stability.



Functional mobility is needed to perform critical soldier tasks.



Create a Rich Proprioceptive Environment

Neuromuscular Control is Characterized by:

- Motor Programs
 - Ensemble sensory feedback
 - Redundancy within the system
- Williams, G. et al. J Orthop Sports Phys Ther, 2001



Create a Rich Proprioceptive Environment

- Awareness of component actions that must be blended smoothly into a complex act.
- Train in a controlled environment to perform without injury in an uncontrolled environment.



Urban Combat Skills

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Movement in Battle Space



Movement in Battle Space





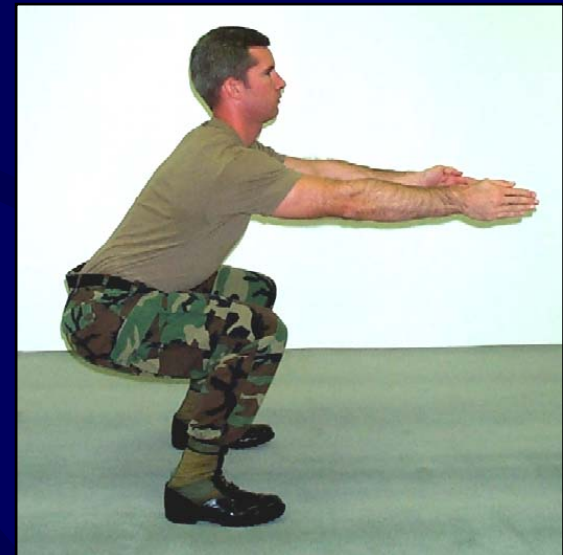
Movement in Battle Space



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Entry Techniques



Entry Techniques



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